

JUSTIN LLOYD

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EXPERIENCE

FPS, San Diego, CA

2024/03 – Present

Principal Engineer – Generative AI & Tools

Building a generative AI pipeline to create elements for a first-person-shooter video game in Unreal Engine. LLMs. Model generation. Model tuning. LoRas. Python. C++. 3D rendering. Game development.

It's a lot of fun. I'll talk about it someday.

REDPILL VR, Los Angeles, CA

2022/01 – 2024/03

Senior Staff Engineer – VR Streaming / Lead Back-end

- Develop an Android VR streaming application in C with Java glue to send LCEVC over QUIC in low-latency environment.
- Develop C++ plugins for Unreal Engine to stream real-time interactive VR worlds over QUIC.
- Promoted to lead back-end engineer for orchestration and membership services using Typescript, Kubernetes, node.js.

ERICSSON, Los Angeles, CA

2020/04 – 2021/10

Technical Lead / Lead Firmware Engineer

- Collaborate closely with a cross-functional team and product development managers on new 5G FWA (Fixed Wireless Access) routers.
- Build smart contracts on the Ethereum blockchain
- Board bring-up and firmware programming for three different hardware router SKUs using C, C++, Rust, Lua, Python, Solidity and Linux
- Reduce build times for the different firmware SKUs from 15+ hours to 20 minutes.

WAYFORWARD TECHNOLOGIES / Lead Programmer

2017/01 – 2020/04

L DIGITAL AGENCY / Head of Engineering (Acquired)

2012/12 – 2017/01

- FACEBOOK / Low-Level Systems

2013/12 – 2016/03

- EBAY / Machine Learning Engineer

2013/05 – 2013/12

ASYLUM LABS / CTO & Co-Founder (Failed Startup)

2012/09 – 2013/05

SONOSIM / Chief Technology Officer (Acquired)

2011/01 – 2012/09

BLIZZARD / Machine Learning Engineer (Consultant)

2010/02 – 2010/12

INFINITE MONKEY FACTORY / CTO

2001/10 – 2010/01

OSIRIS STUDIOS / Lead Engineer (Bankrupt)

1999 – 2001

ACTIVISION / Senior Engineer

1996 – 1999

Ludography: Civilization: Call To Power (Windows, Linux) ▪ Pitfall 3D (PSX, Engine, Tools) ▪ Vigilante 8 (PSX) ▪ Atari 2600 Action Pack (PSX, Emulator, Tools) ▪ HBO Boxing After Dark (PSX) ▪ 420 Surfing (XBOX & PS2, unpublished) ▪ Big Wave Surfing (PS2 & XBOX) ▪ Barbie Dance Revolver (GBC, Engine & Tools, unpublished) ▪ Oni 2 (PS2, unpublished) ▪ Dr Seuss Green Eggs & Ham (GBA, Engine & Tools) ▪ FIFA (iOS) ▪ Interstate '82 (Windows) ▪ Shrek The Third (GBA, Windows, XBOX, PS3, PS2, XBOX 360) ▪ Tyco (PSX) ▪ BattleTanx (GBC, Tools) ▪ Little League Baseball (GBA, Engine & Tools) ▪ Mattel Hotwheels (PS2, Windows, XBOX) ▪ Mattel Hotwheels Stunt Track Driver (Tools, Compiler) ▪ 20+ casino games ▪ and several more mainstream AAA games on console, mobile & desktop.

Softography: T-Mobile Home Internet Router Model 1 & 2 (Linux) ▪ eBay (back-end, Machine Learning) ▪ Kagigi (back-end, Machine Learning) ▪ VR Comics (Mobile, Desktop) ▪ T-Mobile Internet Manager (iOS & Android) ▪ DigiCribbs (Desktop, Web) ▪ World of Warcraft (Back-end, Machine Learning) ▪ HoloLens (SLAM/VSLAM prototypes) ▪ SONY BluRay Authoring Tool (Windows, MacOS) ▪ Ultrasound System (Windows) ▪ Build Pipelines (Linux) ▪ VR Concert Experience (Windows, Cloud, Quest) ▪ and several more on desktop, web and app store.

EDUCATION/TRAINING

Masters

MSc Computer Science (Post)
MSc Artificial Intelligence (Centrale)
MBA Entrepreneurship (AGSM)

Bachelors

BSc Computer Science (U. of Wales)

Associates

HND Software Development (U. of Wales)

Diplomas: Electronics ▪ Culinary Arts (Baking & Pastries) ▪ Graphic Design ▪ Mathematics ▪ Photography ▪ Project Management ▪ International Business Law ▪ Tax Law ▪ Intellectual Property Law ▪ Economics ▪ Accounting

Post-Graduate Certificates: Chartered Financial Accounting ▪ Enterprise Software Development Project Management ▪ Lean Project Management ▪ Marketing ▪ Growth Hacking ▪ Social Media Marketing ▪ Electronics & Circuit Design ▪ Restaurant Studies

Other Certificates: Management Accounts ▪ Commercial Business Law ▪ Public Speaking ▪ Agile Practitioner & Trainer ▪ Product Owner ▪ Scrum Trainer ▪ Lean Software Development Practitioner ▪ Project Management for Enterprise Teams ▪ Project Management for Small Teams ▪ Scaled Agile Practitioner ▪ Kanban Practitioner ▪ DevOps ▪ Mathematics ▪ Real-Time Rendering.

SKILLS

Technical Skills: Artificial Intelligence, Deep Learning, Machine Learning ▪ Machine Vision ▪ Augmented Reality ▪ Virtual Reality ▪ Generative AI ▪ LLMs ▪ Cross-Platform Development ▪ Game Development ▪ Block Chain ▪ Low-Level Systems Programming ▪ Optimization ▪ Build Pipelines ▪ Motion Control Systems & Robotics ▪ Hardware Interfacing ▪ Systems Programming ▪ Autonomous Aircraft & Vehicles ▪ Containers & Virtualization & Emulation ▪ Hardware Emulators ▪ ICE Debuggers ▪ Binary Ninja ▪ IDA Pro ▪ Ghidra ▪ Reverse Engineering ▪ Sensors ▪ IaC ▪ Sensor Fusion ▪ IoT ▪ Microservices ▪ 3D Math ▪ I2C ▪ SPI ▪ Driver Development ▪ GPU Programming ▪ CI/CD Pipelines ▪ Game-Client/Game Server Networking ▪ Concurrency ▪ Multithreading ▪ Video Processing & Transcoding ▪ Compiler & Interpreter Development ▪ Low-Latency (sub 60ms) Glass-to-Glass Live Streaming ▪ JTAG ▪ Parallel & Distributed Systems ▪ Networked Applications ▪ Server Programming ▪ System Architecture ▪ SaaS ▪ IaaS & PaaS ▪ Composable Infrastructure

Soft Skills: Team-Building ▪ Engineering Hiring ▪ Mentoring ▪ Crisis Management ▪ Social Media Marketing ▪ Corporate Training & Teaching ▪ Client Relationships ▪ Public Speaking & Presenting ▪ Agile Methodologies

Business Skills: Accounting ▪ Business Development ▪ Entrepreneurship ▪ Negotiation ▪ Raising Start-Up Funding ▪ Team Leadership ▪ International Project Management ▪ Cross-Functional Project Management

Languages: C++ ▪ C ▪ Assembler ▪ Ruby ▪ C# ▪ Go ▪ Rust ▪ Clojure ▪ Hack ▪ LINQ ▪ SQL ▪ N1SQL ▪ JavaScript/Typescript ▪ Java ▪ Perl ▪ PHP ▪ Python ▪ Lua ▪ Kotlin ▪ Swift ▪ Objective-C

Technologies: DirectX ▪ ChatGPT ▪ StableDiffusion ▪ OpenAI ▪ OpenGL ▪ OpenCL ▪ .NET ▪ MVC.NET ▪ OpenWRT ▪ Qualcomm router OS ▪ gstreamer ▪ ffmpeg ▪ Pixi.js ▪ Babylon.js ▪ React Native ▪ FastAPI ▪ Next.js ▪ Unity3D ▪ Unreal Engine ▪ nodejs ▪ NHibernate ▪ Ethereum ▪ Solidity ▪ Vyper ▪ Entity Framework ▪ OpenCV ▪ Accord ▪ PyTorch ▪ CUDA ▪ TensorFlow ▪ YOLO ▪ Accord ▪ Underscore.js ▪ Terraform ▪ Puppet ▪ Ansible ▪ Processing.js ▪ Three.js ▪ Backbone.js ▪ Redis ▪ Couchbase ▪ RabbitMQ ▪ Regular Expressions ▪ Microsoft CNTK ▪ Microsoft Speech Recognition System

Platforms: Windows ▪ Linux ▪ Bare Metal ▪ AWS ▪ GCP ▪ RTOS ▪ macOS ▪ OpenWRT ▪ Playstation 1/2/3 ▪ XBOX One/360 ▪ Switch ▪ Arduino ▪ Raspberry Pi ▪ Jetson ▪ x86 ▪ ARM ▪ RISC-V ▪ Embedded Linux ▪ Embedded Firmware ▪ iOS ▪ Android

Software: Docker ▪ Kubernetes ▪ VMWare ESX ▪ Vagrant ▪ Chef ▪ Puppet ▪ NGINX ▪ Jenkins ▪ TeamCity ▪ Apache ▪ MySQL ▪ MSSQL ▪ SVN ▪ Git ▪ Perforce ▪ Visual Studio ▪ IntelliJ